

Work Order ID 98825

March-26-13 9:03:19 AM

ASAP

98825

PRELIMINARY ISSUE

Page 1

Item ID: D4792-5

Accept

N900040100

Setup Start *NS1*

Revision ID: PRELIM

Item Name: Angle

Stop *NS2*

Start Date: 3/26/13 Start Qty: 2.00

2

Cust Item ID:

Required Date: 4/09/13 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: ML5 Date: 13-03-26 Tooling:

Run Start *NR1*

QC: Date: SPC (Y/N):

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D4792	pa <u>3</u> <u>AA</u>
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100		0.00
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100

Waterjet

Memo

0.00

2 0 Jm 13-3-26

FLOW CNC Waterjet

6061 .050

1-Cut as per Dwg
Dwg Rev: PA3
Prog Rev: PA3

2-Deburr if necessary

110	QC2- Inspect parts off machine FAI/FAIB	0.00
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110

QC

Memo

0.00

2 0 Jm 13-3-26

Quality Control

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 98825

March-26-13 9:03:19 AM

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Page 2

Item ID: D4792-5

Accept

N900040100

Setup Start ***NS1***

Revision ID: PRELIM

Stop ***NS2***

Item Name: Angle

Start Date: 3/26/13 Start Qty: 2.00

2

Cust Item ID:

Required Date: 4/09/13 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120 QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

DA 27 2.00
B3 27

2
Inspect as per
Dwg PAB

130 Bend as per dwg

0.00

130

Brake NC

Memo

0.00

Brake NC

2

S
13/22/27

140 QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.00

Quality Control

DA 27 2.00
B3 27

2
Inspect as per
Dwg PAB

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

Work Order ID 98825

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Page 3

Item ID: D4792-5

Accept

N900040100Setup Start ***NS1***

Revision ID: PRELIM

Stop ***NS2***

Item Name: Angle

Start Date: 3/26/13 Start Qty: 2.00

2

Cust Item ID:

Required Date: 4/09/13 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Identify as per dwg & Stock Location: _____	0.00							
150									
Packaging	Memo	0.00							
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.00							
Quality Control									

CMF
1342

POSITIVE RECALL

EFFECTIVE _____ AUTH _____

RELEASED _____ DATE _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
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☐ Ovalized
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Picklist Print

March-26-13 9:03:22 AM

Page 1

Work Order ID: 98825

98825

Parent Item: D4792-5

D4792-5

Parent Item Name: Angle

Start Date: 3/26/13

Required Date: 4/09/13

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 13.03.22 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M6061T6S.050

Purchased

No

100

sf

443.2620

0.027

0.056842

M6061T6S 050

**

0.1

Jm3326

6061-T6 .050 Sheet

Location

Loc Qty

Loc Code

MAT021

443.262

114799

56.682

114993

27

121192

107

123293

252.58

123293

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

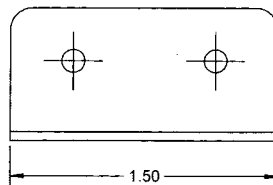
QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

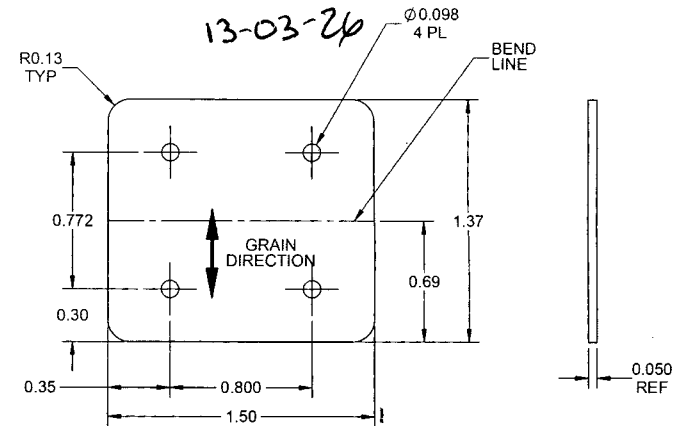
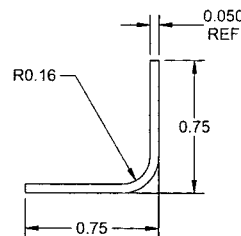
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other



D4792-1 ANGLE
MAKE FROM D4792-1F FLAT PATTERN



D4792-1 ANGLE FLAT PATTERN ANGLE

NOTES:

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET 0.050 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M2024T3S.050 OR M6061T6S.050
OR
2024-T3 ALUMINUM SHEET, 0.050 THICK
QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209
REF DART SPEC M6061T6S.050 OR M2024T3S.050

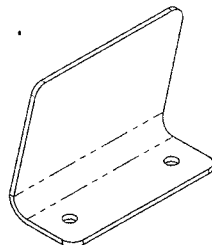
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.01 lbs

PRELIMINARY ISSUE

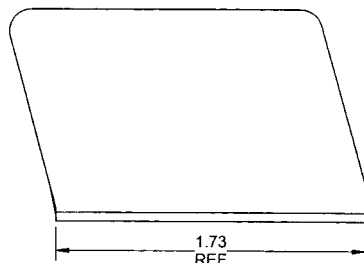
13.03.02

PA3	NEW ISSUE	SC	13.03.02
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	PC	DRAWING NO.	REV. PA3
MFG. APPR.		D4792	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		ANGLE	NTS
DATE	13.03.02	<small>COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

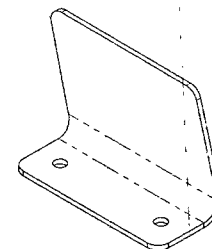
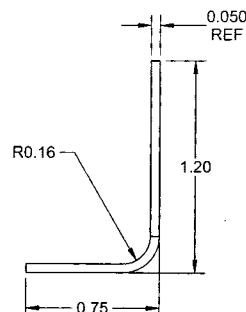
98825



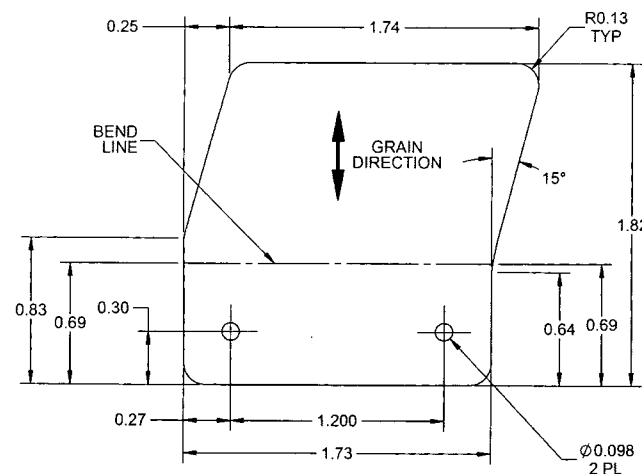
D4792-4 ANGLE
ISO VIEW
MAKE FROM D4792-3F



D4792-3 ANGLE
D4792-4 OPPOSITE
MAKE FROM D4792-3F FLAT PATTERN



D4792-3 ANGLE
ISO VIEW
MAKE FROM D4792-3F



D4792-3 FLAT PATTERN ANGLE

PRELIMINARY ISSUE

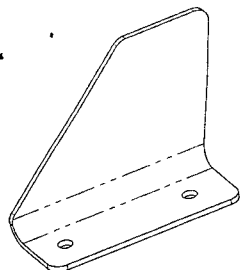
13.03.02

NOTES:

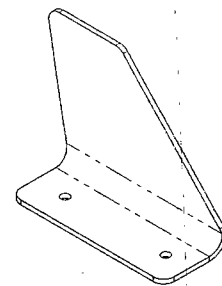
- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET 0.050 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M2024T3S.050 OR M6061T6S.050
OR
2024-T3 ALUMINUM SHEET, 0.050 THICK
QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209
REF DART SPEC M6061T6S.050 OR M2024T3S.050
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.03 lbs

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	DC	DRAWING NO. D4792	REV. PA3 SHEET 2 OF 4
MFG. APPR.		TITLE ANGLE	SCALE NTS
DE APPR.		<small>COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	
DATE	13.03.02		

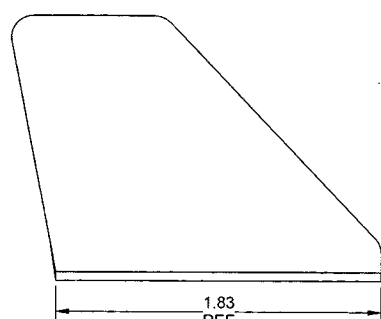
98825



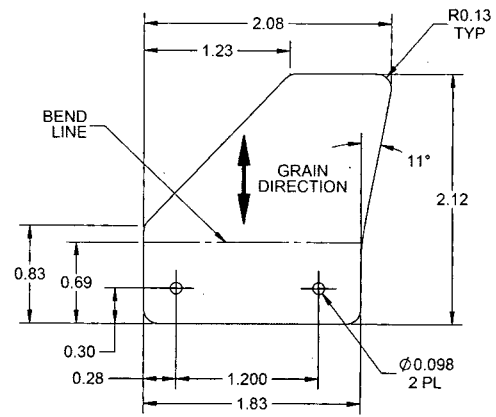
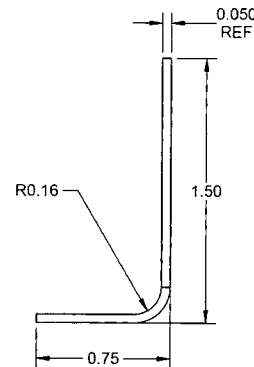
D4792-6 ANGLE
ISO VIEW
MAKE FROM D4792-5F



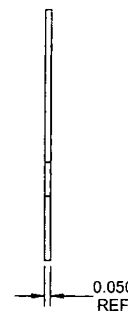
D4792-5 ANGLE
ISO VIEW
MAKE FROM D4792-5F



D4792-5 ANGLE
D4792-6 OPPOSITE
MAKE FROM D4792-5F FLAT PATTERN



D4792-5F FLAT PATTERN ANGLE



NOTES:

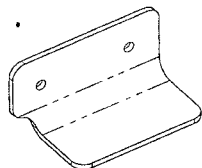
- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET 0.050 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M2024T3S.050 OR M6061T6S.050
OR
2024-T3 ALUMINUM SHEET, 0.050 THICK
QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209
REF DART SPEC M6061T6S.050 OR M2024T3S.050
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.02 lbs

PRELIMINARY ISSUE

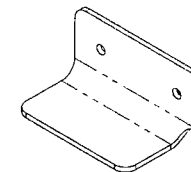
13.03.02

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	DL	DRAWING NO.	REV. PA3
MFG. APPR.		D4792	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		ANGLE	NTS
DATE	13.03.02	<small>COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

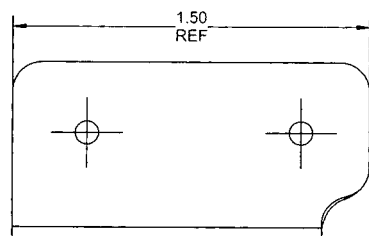
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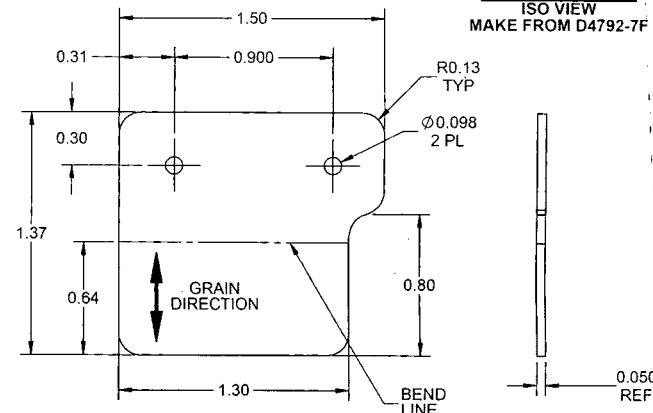
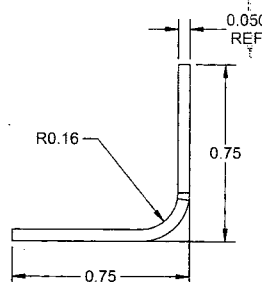
D4792-8 ANGLE
ISO VIEW
MAKE FROM D4792-7F



D4792-7 ANGLE
ISO VIEW
MAKE FROM D4792-7F



D4792-7 ANGLE
D4792-8 OPPOSITE
MAKE FROM D4792-7F FLAT PATTERN



D4792-7F FLAT PATTERN ANGLE

NOTES:

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET 0.050 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M2024T3S.050 OR M6061T6S.050
OR
2024-T3 ALUMINUM SHEET, 0.050 THICK
QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209
REF DART SPEC M6061T6S.050 OR M2024T3S.050
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.02 lbs

PRELIMINARY ISSUE

13.03.02

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	DC	DRAWING NO. D4792	REV. PA3
MFG. APPR.			SHEET 4 OF 4
APPROVED		TITLE ANGLE	SCALE NTS
DE APPR.		<small>COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	
DATE	13.03.02		

Receiving Report

Date: 12/10/11
 Supplier: CAMP

Batch No: M123 293
 Dart P/O: 18068

Packing Slip: Yes ☒ No ☐
 Invoice: Yes ☐ No ☒
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐
 Waybill Attached: Yes ☐ No ☒ N/A ☐
 Shipment Complete: DA Yes ☒ No ☐ N/A ☐
 QC6 Inspection 12/10/11 N/A ☒
 Work Order 289 N/A ☒

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12 [Signature]

Production/Admin: 12/10/11
 Date [Signature]
 Received/Costing [Signature]
 Initial [Signature]

Location _____

Page 1 of 1

All amounts are calculated in domestic currency.

Grouped by Vendor ID

[illegible]

935, boul. du Havre
Valleyfield (Québec)
J6S 5L1

TÉLÉPHONE : 450 377-4248
FAX : 450 377-5696

MONTREAL : 514 336-4248
FAX : 514 336-4246

DISTRIBUTEUR D'ACIER ET MÉTAUX SPÉCIALISÉS
STEEL AND SPECIALTY METALS DISTRIBUTOR

ONTARIO : 1 800 667-4248
FAX : 1 866 456-4242

On a du Saurer "FER"

VENDU À / SOLD TO:

EXPÉDIEZ À / SHIP TO:

613-632-5200

613-632-1053

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY,
ONTARIO
K6A 1K7

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY,
ONTARIO
K6A 1K7

VOTRE N° DE COMMANDE / YOUR P.O. N°
F018065

VEND. / SALESM.	CODE CLIENT / CUST. CODE
V	DAER

EXPEDIE PAR / SHIP VIA

TERMS / TERMS

NET 30 JOLR33

TERR. 25

REMARKS / REMARKS

PAGE N° 00

CODE DE PRODUIT PRODUCT CODE	COMMANDE ORDERED	EXPEDIE SHIPPED	DESCRIPTION	POIDS WEIGHT	PRIX PRICE	PAR PER *	MONTANT AMOUNT
			INITIAL TEST REQUIS**				
MD 1218F	4	4x14	EXPANDED METAL 1/2 X 18F 4 X 4' X 8'	84.00			
	192	4x14	RENT NON DISPONIBLE ALU PLATE 6061-T6 .032" (20G) 4 X 4' X 12'	192.00			
PAL4121606061	6	6x14	HEAT: 781264 6061-T6 AL. SH. .051 (16G) 48X144 6 X 4' X 12'	287.00			
			HEAT: 391156				

* Unités de mesure :	CLB	Cent livres	CPI	Cent pieds	UN	Unité	PI	Pied	PC	Pied carré
Units of measure :		Hundred pounds		Hundred feet		Unit		Foot		Square foot

POIDS TOTAL	48.3
TOTAL WEIGHT	

CONDITIONS

[illegible]

CONDITIONS

[illegible]

MERCHANDISE RECEIVED IN GOOD CONDITION

PRÉPARÉ / PREPARED:	VÉRIFIÉ / VERIFIED
PAR BY <i>3</i>	PAR BY <i>FM</i>

LIVRE / DELIVERED 5 RAR BY	HEURE / TIME 1/2
-------------------------------------	---------------------

WARD AND SENSE CODE	STATION CODE	TIME	DATE	DAY	MTM	J/D
X	101	12	00	11		

SOUS-TOTAL
SUB TOTAL :

T.P.S.
G.S.T.

T.V.Q. / T.V.H.
Q.S.T. / H.S.T.

TOTAL

Nº TPS / GST REG. Nº R 135 834 717 - Nº ENR TVQ / GST REG. Nº 016 888 543

SIGNATURE OF CLIENT/CUSTOMER'S SIGNATURE

CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that sample representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

Per:

Malcolm Murphy

Director of Manufacturing Davenport Works

Terrence Thom

Quality Assurance Manager

1345958

Ship Date

0

B.L. No.

Invoice No.

Alcoa No. Item

2012-02-21

6796434

00000

1000345769-1

DPE-45769-1

P.O. No./Govt Contract No.

Customer

Alcoa Item

C64614 Ln#: 1

Page 2 of 2

CQR: 0217944.5 -Specification Limits (cont.)

Chemical Composition		SI	FE	CU	MN	MG	CR	ZN	TI	Other Each	Other Total	Aluminum
Max		0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15	
Min		0.40		0.15		0.8	0.04					
Alloy 6061												
Lot: 391156 - Mechanical, Physical, Metallography, Quantometer Results												
Temp		No->		UTS		TYS		ELAD				
Dir		Test		KSI		KSI		PCT				
T6		Long Transv.		7		50.2		43.8		10.9		
						50.3		43.9		11		
						50.2		44		10.6		
						50.2		43.8		11		
						50.4		43.8		11.3		
						50.2		43.6		11.4		
						49.9		43.4		10.9		

Cast Number	Chemical - OBS	SI	FE	CU	MN	MG	CR	ZN	TI
12800482	Actuals	0.66	0.5	0.25	0.13	1.0	0.16	0.01	0.06

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)], it was manufactured in the United States



CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4679 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that sample representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

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Per:

[Signature]

Malcolm Murphy
Director of Manufacturing Operations

[Signature]

Terrence Thom
Quality Assurance Manager

1345958

0

Ship Date

B.L. No.

Invoice No.

Alcoa No. Item

2012-02-21

6796434

00800

1000345769-1

DPE-45769-1

P.O. No./Govt Contract No.

Customer

Alcoa Item

C64614 Ln#: 1

Page 2 of 2

CQR: 0217944.5 -Specification Limits (cont.)

Chemical Composition		SI	FE	CU	MN	MG	CR	ZN	TI	Other	
										Each	Total Aluminum
	Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15
	Min	0.40		0.15		0.8	0.04				REMAIN

Alloy 6061

Lot: 391156

- Mechanical, Physical, Metallography, Quantometer Results

Temp	Dir	Test	No->		UTS	TYS	EL4D
			KSI	PCT			
T6	Long Transv.	7			50.2	43.8	10.9
					50.3	43.9	11
					50.2	44	10.6
					50.2	43.8	11
					50.4	43.8	11.3
					50.2	43.6	11.4
				49.9	43.4	10.9	

Cast Number	Chemical - OBS	SI	FE	CU	MN	MG	CR	ZN	TI
12800482	Actuals	0.66	0.5	0.25	0.13	1.0	0.16	0.01	0.06

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)], it was manufactured in the United States





Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO18065

Purchase Order Date 10/03/12

PO Print Date 10/03/12

Page Number 1 of 2

Order From :

CAMPI STEEL
935 BOUL. DU HAVRE
VALLEYFIELD, QC J6S 5L1
CA

VC-CAM002

Contact Name

Vendor Phone

Vendor Fax

Vendor Account Nbr

800.667.4248

450.377.5696

Buyer

Requisition Nbr

Tax Resale Nbr

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

Destination-Collect

123293

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M569EX0.50-18F 018 y	569 Expanded Metal	10/09/12 Yes	128.00 sf	Yours ppd	\$1.0625	\$136.00
		Special Inst: MATERIAL: CARBON STEEL EXPANDED METAL MESH AS PER ASTM F1267 OR MIL-M-17194D					
2	M6061T6S.032 021 y	6061-T6 Sheet 0.032"	10/09/12 Yes	192.00 sf	Yours ppd	\$1.8500	\$355.20
		Special Inst: MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A- 250/11 OR AMS 4025 OR AMS 40327 OR ASTM B209					
3	M6061T6S.050 021 y	6061-T6 .050 Sheet	10/09/12 Yes	288.00 sf	Yours ppd	\$3.0184	\$869.30

**MATERIAL CERTIFICATION
REQ'D UPON DELIVERY**

No substitution or deviation without
consent.

Certificate of Conformity or Material
Certification required **YES** NO

Change Nbr: 1

Change Date: 10/03/12